Impact of Dividend Policy and its Determinants on Share Price Volatility and Market Value of the Firm in Indian Corporate Sector

A

Revised Synopsis

Submitted for the Registration of

Degree of Doctor of Philosophy

In Accountancy & Law

(Faculty of Commerce)

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I. INTRODUCTION

The fact that the corporate dividend policy is crucial aspect of financial management and it has ramifications for various groups of stakeholders of a company is not new. A large number of studies have been propounded in the past to examine the theoretical significance for unresolved dividend policy issues. Many eminent academicians, financial economists and researchers propounded ample theories and countless empirical evidences, but the issue seems to be unresolved and have been subject of debate in financial literatures. (Kaźmierska-Jóźwiaka 2015, Dewasiri & Banda 2015 and Imran, 2011). There are various questions concerning dividend policy decisions that have not been reached to any consensus or agreement. Why do companies pay dividends to their shareholders? What are the factors determining the dividend policy? Why do shareholders give preference to dividend over retained earnings? How do dividends impact the firm performance and shareholder's wealth? These questions create a mysterious situation known as Dividend Puzzle. Black (1976) has profoundly described dividend puzzle in classic paper *as* ***'The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just don't fit together'***. Brealey and Myers (2005) describe dividend policy as one of the top ten most difficult unsolved problems in financial economics.

Following the work of Lintner (1956) and Miller & Modigliani (1961), the dividend policy decisions have emerged out to be the crucial decisions that have been subject to several debates and controversies. A plethora of research in the area of dividend policy decisions has been carried out in developed parts of the world and the issues are still unresolved and controversial. Since then, the corporate dividend policy decisions have undergone many changes by incorporating more vital issues including attracting investors in varied tax brackets, efforts of firms in increasing their market value etc. (Singh & Tandon, 2019).

The proposed research will be undertaken to examine the determinants of corporate dividend policy and impact of dividend policy on share price volatility and the market value of the firm in the context of Indian corporate sector.

II. THEORITICAL BACKGROUND

The corporate dividend decision has remained as one of the most controversial subject in the area of corporate finance. The main objective of such a decision is to ascertain the proportion of the earnings of the company to be distributed by way of dividends among the shareholders and also to determine the level of retained earnings for reinvestment purpose. It is considered as an integral part of the financial decision making and it is directly related with other remaining two equally important decisions such as the investment and the financing decisions (Singhania & Gupta, 2012). S. Saravanakumar (2011) explains dividends as a distribution of the book surplus accompanied by a distribution of assets or by a change in the form of equities or an increase in the liabilities of the corporation.

The foremost research on the determinants of corporate dividend policy is conducted by Lintner (1956) who conducted his study on diverse group of 28 American companies during 1947-53. He concluded that dividend decisions are dependent on current profitability and previous year dividends. Thereafter, many academicians, researchers and financial scholars indulged into the ongoing debate on the corporate dividend policy without any conclusive results and consensus. Later on, many researchers like Fama and Back tested the John Lintner's model on the dividend data on 19 years of 392 major North American Industrial firms and concluded that the John Lintner's dividend model thrived well in describing the dividend changes of the individual firms (Fama & Babiak, 1968).

The academicians and financial researchers have proposed various theories as an attempt to resolve the concept of dividend puzzle, the most contemporary issue in the field of corporate finance. The following part on the theoretical background provides light on various well known dividend theories and models.

1. Dividend Irrelevance Theory

Miller and Modigliani in their seminal paper postulated that dividend policy would be irrelevant decision and has no impact on the value of the firm under the unrealistic assumptions of perfect capital market, absence of flotation and transaction costs, and free and equal access to all public and private information. They stated that value of the firm is based on its earnings and investment decisions irrespective of the fact how firms set their dividend polices and whether they pay dividends or not. Investors are indifferent between the dividends and capital gains (Miller & Modigliani, 1961).

2. Residual Theory of Dividends

The underlying principle is that investment, financing and dividend policy decisions of a firm should be interrelated even in the short run. The residual dividend policy, one of the recommendations of the agency theory, states that managers pay the free cash flows to the shareholders after funding all the positive Net Present Value or profitable investments opportunities available with the firm. But the companies do not follow this principle as concluded by the substantial empirical studies. Instead, firms tend to dividend smoothing and build up cash balances to fund future investment opportunities. Firms resort to short term financing as an alternative to dividend cuts during funding shortage. (Smith, 2009)

3. Dividend Preference Theory (Bird in Hand Theory)

This theory has been developed by Myron Gordon and John Lintner in response to dividend irrelevance theory postulated by Miller and Modigliani. It states that investors give more preference to current dividends (bird in hand) than to future risky capital gains (two in the bush). This is because investors are risk averse and of apparent uncertainty in future capital gains. Firms with higher current dividend payout reduce the uncertainty associated with future cash flows that will lower the cost of capital and hence, maximization of the firm value (Myron, 1963 and Lintner, 1962). This theory is later on criticized on the ground that riskiness in operating cash flows determines the risk of firms rather than way of distribution of

earnings and coined this argument as bird in the hand fallacy (Miller & Modigliani, 1961 and Al-Malkawi, Rafferty, & Pillai, 2010)

4. Dividend Clientele Theory

Miller & Modigliani (1961) initially propose clientele effects and state that investors tend to prefer the corporations whose payout ratio they prefer. They also state that each payout ratio tends to attract a class of investors, a clientele i.e. higher dividend payout ratio attract investors with low marginal tax rates and vice-versa. Any clientele is as good as any other from the firm's point of view and if the firm changes its payout ratio, the result would be a change in the clientele. But that will not affect the value of the firm because from the firm's perspective, any clientele is as good as any other (Kinkki, 2001).

Ogden, Jen, and O'Connor define clientele effects as "a set of investors who are attracted to the stocks of firms that have the dividend policy they prefer, based on their tax or liquidity circumstances." They conclude that managers can enhance the share price through the dividend clientele effect by adopting a dividend policy that appeals to investors whose preferences are not met by other firms currently in the stock market (Baker H. K., 2009).

In clientele effects, the studies assume that some classes of investors may prefer different levels of dividends due to their different levels of taxation. No agreement has reached although many empirical studies examine the issue of dividend clientele as some empirical studies support this prediction while others provide contradictory evidence (Al-Malkawi, Rafferty, & Pillai, 2010 and Baker H. K., 2009).

5. Dividend Asymmetric Information and Signaling Theory

This theory assumes that dividends convey information about the firm's private information i.e. future prospects and earnings thereby reducing asymmetry between the management and shareholders (Bhattacharya, 1979). The managers of the firm have access to insider private information that might not be available to outside shareholders. The firms try to fill this gap of knowledge between firm and

shareholders with the help of dividends that serve as signal about the firm's future prospects. The shareholders value the firms on the basis of dividend announcements (signals) in terms of stability and changes in dividend (Al-Malkawi, Rafferty, & Pillai, 2010).

6. Agency Costs and the Free Cash Flow Hypothesis

The concept of free cash flow hypothesis model discovers its roots to the agency problem suggested by Jensen and Meckling (1976) between corporate insiders and external investors due to the divergence of their interests. The managers have the self serving motive to hoard the excess cash and expand the firm beyond its optimal size at the cost of the investors. This induce them to invest in negative NPV projects for which they rely on internal financing as they resist to external financing to avoid further market scrutiny. The existence of considerable free cash flows induces managers to overinvest but investors are acquainted with agency problem. Thus overinvestment potential is lessened and investors react positively to the news of increased dividends. In such case, dividends are believed to play significant role in reducing conflicts between managers and investors as larger dividend increases the chance that external equity capital will have to be raised. Any dividend initiation or increase means reducing hoarding of excess cash at the disposal of managers, thereby reducing their ability to misuse these funds as managers are reluctant to cut dividends (Kinkki, 2001 and Baker H. K., 2009).

7. Dividend Tax Preference Theory

It considers the time value of money and it is based on the empirical evidence that investors prefer companies with low dividend payout and retain their earnings due to the reasons associated with tax based on the observation of United States stock market. It assumes that dividends are taxed immediately and at higher rates than capital gains and the investors defer this tax liability until they decide to sell the stock. This tax differential status prompts investors to prefer firms with low dividend payout ratio by willing to pay a premium to firms with low dividend payout. This results in lower cost of capital leading to

maximization of the value of the firm (Brennan, 1970, Stapleton, 1972 and Al-Malkawi, Rafferty, & Pillai, 2010).

8. Firm Life Cycle Theory of Dividends

It is based on the fact that firms tend to set dividend polices depending on diverse financial needs in different stages throughout their life cycle. Young firms experience growth opportunities so they tend to conserve cash earnings by not paying dividends and reinvesting in profitable investments. They also find difficulties in raising capital from external sources. In contrast, mature firms do not face ample growth opportunities s and hence, generate more cash earnings internally and tend to pay more dividends (Mueller, 1972).

9. Catering Theory of Dividend

It postulates that managers give investors what they want by establishing a close link between fluctuations in propensity to pay dividends and catering incentives. While deciding dividend payout ratio, mangers will pay dividends when investors put a relatively stock price premium on dividend payers and skip the dividends when investors prefer dividend non-payers (Baker, Malcolm, & Wurgler, 2004a and Baker, Malcolm, & Wurgler, 2004b).

III. LITERATURE REVIEW

This section has been divided into two parts namely International reviews and National reviews which have presented in tabular form as follows:-

International Reviews

S. No.	Year	Title	Author	Objectives	Research Methodology	Findings
1	2019	Dividend policy and stock price volatility in an emerging market: Does ownership structure matter?	Thi Kieu Hoa Phan and Nam Hoai Tran	To study the impact of dividend policy and ownership structure on stock price volatility in Vietnamese market.	The study takes into account 480 samples of non-financial listed firms covering nine industries for the period 2008 to 2015 and employs panel data model.	The study concludes that dividend yield mitigates volatility in stock price and ownership structure has no moderating effect on the relation between dividend yield and stock price volatility.
2	2018	Dividend payouts of travel and leisure companies in Western Europe: An analysis of the determinants	Mahboubeh Bahreini and Cahit Adaoglu	To study the determinants of dividend payout ratios in five countries i.e. France, Spain, Italy, Germany, and the United Kingdom.	Sample data of 65 publicly traded companies for the period 2005 to 2015 is studied and Tobit estimation model is used.	The study finds company size, profitability, investment opportunities and asset intangibility have significant positive effect on the dividend payout policies.
3	2018	Role of Free Cash Flows in Making Investment and Dividend Decisions: The Case of the Shipping Industry	Hee-Jung YEO	To analyze the impact of cash flows on investment and dividend policy decisions in the Korean shipping industry.	The author studies sample data of 135 shipping firms for the period 2009-14 and Generalized Least Squares (GLS) regression technique is used.	The study finds larger free cash flows results in increase in investments and decrease in dividend payments.
4	2018	Catering to the Whole Spectrum of Dividends: Evidence from the Taiwan Stock Market	Chia-Chen, Teng and Victor W. Liu	To study the evidence of catering behaviour in the listed Taiwanese firms in respect of cash, stock and dual dividend.	The regression models is applied on the data for a period of 1991-2008 on calendar year basis constituting 6999 firm year observations.	The results confer that incase cash dividend is high then firms are less likely to issue stock dividend. Moreover, the large, mature and profitable firms paying the

						dividends in past have high probability of paying dividends in future too.
5	2016	The effect of dividend policies on wealth maximization – a study of some selected plcs	C.N. Ozuomba, A.S. Anichebe and P.V.C. Okoye	To study the effect of dividend polices on shareholders wealth of public companies in Nigeria.	The sample data of 10 listed companies are studied for a period of one year and the questionnaire is distributed among the top management officials.	The authors conclude that dividend policies affect shareholders wealth and investors support bird-in-hand hypothesis of dividend payment as opposed to the retention policy by the firms.
6	2016	Financial constraints and dividend policy	Shams Pathan, Robert Faff, Carlos Fernández Méndez and Nicholas Masters	To examine the performance of financially constrained firms around higher dividend announcements in US stock markets.	A sample of 7866 dividend increase announcements during the period 1989-2012 is observed and univariate and cross sectional regression methods are employed.	Financially constrained firms show worse stock reactions in response to new equity announcements following dividend increase and positive response when they encounter high investment growth opportunities.
7	2015	Determinants of Target Dividend Payout Ratio: A Panel Autoregressive Distributed Lag Analysis	Kartal Demirgunes	To study the determinants of Target Dividend Payout Ratio (TDPR).	The determinants are analyzed through panel autoregressive distributed lag analysis methodology in respect of BSIT listed cement manufacturing firms for the period 2002-12.	Findings suggest determinants like probability, growth and corporate taxation have significant negative effects while risk and market expectations have positive effects in the long run. Further, only profitability has been found to be

						affecting positively.
8	2015	Dividend Policy and Stock Price Volatility: An Error Corrected Approach	N.J. Dewasiri and Y.K. Weerakoon Banda	To study the relation between dividend policy and stock price volatility in the Sri Lankan stock market.	A sample of 139 non-financial firms listed on Colombo Stock Exchange is selected and cross section random effect method is applied.	Dividend payout impacts significantly negative and Company size impacts significantly positive on Stock price volatility.
9	2015	Determinants of Dividend Policy : Evidence from Polish Listed Companies	Bogna Kaźmierska-Jóźwiak	To study the dividend policy determinants of listed Polish non-financial firms.	The sample data for the period 2000 to 2012 is collected and analyzed with fixed and random effects techniques.	The study concludes that profitability and leverage show significant negative relationship with dividend payout ratio.
10	2015	Determinants of Target Dividend Payout Ratio: A Panel Autoregressive Distributed Lag Analysis	Kartal Demirgüneş	To find the determinants of target dividend payout ratio (TDPR) of cement manufacturing industry in Turkey.	The data of 17 Borsa Istanbul (BIST) for the period of 2002-12 is studied and panel ARDL modeling approach is used.	The findings show that profitability, growth and corporate taxation impact negatively while risk and market expectations impact positively in long run. Whereas, profitability impact positively in the short run.
11	2014	Determinants of the Dividend Policy: An Empirical Study on the Lebanese Listed Banks	Christopher Maladjian & Rim El Khoury	To investigate the factors determining the dividend policy of listed Lebanese banks.	It employs OLS and the dynamic panel regression models to study the impact of seven variables on dividend payout ratios for	The study finds firm size, risk, and last year's dividends affect positively while opportunity growth and profitability

					the period 2005 to 2011.	affect negatively on dividend payout policies.
12	2013	Cash dividend policy, corporate pyramids, and ownership structure: Evidence from China	William Bradford, Chao Chen and Song Zhu	To study the impact of state controlling ownership and ownership through corporate pyramid structures on dividend policies on firms in China.	The authors study 12630 observations covering the period 1999 to 2010 and OLS regression method is used.	The study finds that state owned firms pay higher dividend than the privately owned firms.
13	2012	Determinants of dividend payout policy: Evidence from Bangladesh	Sheikh Taher Abu	To study the determinants of dividend policy of 11 DSE or CSE listed commercial banks.	The author employs Operating Least Squares (OLS) method and then panel data estimations through both fixed and random effects on sample data for the period 2003 to 2010.	The study concludes current earnings and liquidity have positive significant effect on dividend policy.
14	2011	Determinants of Dividend Payout Policy: A Case of Pakistan Engineering Sector	Kashif Imran	To investigate the factors those determine the dividend paying behaviour of the firm.	The study covers data for the period of 1996 to 2008 of 36 Karachi Stock Exchange listed engineering firms and applies panel regression model (both fixed and random effects).	It finds factors like previous DPS, profitability, cash flow, sales growth and firm size as most critical in determination of dividend policy.
15	2011	Family control, institutional environment and cash dividend policy: Evidence from	Zhihua Wei, Shinong Wu, Changqing Li and Wei Chen	To test the affect of family control, institutional environment and their association on cash dividend policy of	A sample of 1486 Chinese listed companies is studied for the period 2004-08 and analyzed through logistic	The results show family owned firms have lower cash dividend payout ratio and propensity to pay dividends & stronger impact

		China		Chinese listed firms.	& Tobit regression methodology.	of regional institutional environment on cash dividends than in case of non-family firms.
16	2011	Corporate Cash Holdings and Dividend Payments: Evidence from Simultaneous Analysis	Basil Al-Najjar and Yacine Belghitar	To study the relationship between corporate cash holdings and dividend policy of non-financial firms in UK.	The study employs three models namely, single equation model, simultaneous equation model and dynamic behaviour model in studying the sample data of 400 non-financial firms for the period 1991 to 2008.	The findings show that dividend policy is affected by growth, size, risk, and profit while corporate cash holdings are impacted by dividends, leverage, growth, size, risk, profitability and working capital ratio.
17	2011	Do dividend tax cuts lead firms to increase dividends: Evidence from China	Chun Fei Wanga and Yunnan Guo	To study the impact of dividend taxation on dividend policies.	The study employs natural experiment and difference in difference estimator methods in listed Chinese firms.	The findings support that cut in dividend tax in 2005 leads to increase in dividend payments.
18	2011	Dividend policy and share price volatility: UK evidence	Khaled Hussainey, Chijoke Oscar Mgbame and Aruoriwo M. Chijoke-Mgbame	To study the relationship between dividend policy and share price changes in the UK stock market.	The multiple regression analysis is used for a period of 10 years i.e. 1998-2007 in respect of publicly quoted UK companies.	The study finds share price changes is positively related with dividend yield and negatively related with dividend payout ratio.
19	2006	Dividend policy in Switzerland	Bogdan Stacescu	To study variations in the dividend policy of Swiss companies.	Cross-sectional comparison techniques are used on sample of 175 non-financial and non-utility firms for the period 1974-2004.	The findings support the signaling theory of dividends as dividend increase shows good prospects of higher earnings.

National Reviews

S. No.	Year	Title	Author	Objectives	Research Methodology	Findings
1	2019	The Effect of Dividend Policy on Stock Price: Evidence from the Indian Market	Narinder Pal Singh and Aakarsh Tandon	The study is conducted to test the impact of dividend policy on the Market Price Shares of Nifty 50 companies.	It employs multiple panel data regression models i.e. pooled regression, fixed effect model and random effect model on sample data for the period 2008-2017. The Hausman test is also used to reveal the appropriate panel regression method.	The Hausman test finds the random effect model as appropriate model in explaining the relationship among the given variables. All three regression models show that EPS has positive impact on Market Price share (MPS) whereas, Dividend Yield (DY), Return on Equity (ROE) and Profit After Tax (PAT) have negative impact on MPS. It concludes the significant impact of dividend policy on the stock price of the firms.
2	2019	Dividend Behaviour of Indian-listed Manufacturing and Service Sector Firms	Sanjeev Kumar and K. S. Ranjani	To study the divergence of dividend behaviour among manufacturing and service firms.	The sample data of 264 manufacturing and 188 service BSE listed firms for a period of 2007 to 2015 is selected and OLS model is used.	The results show that firms in manufacturing sector are found to be more efficient in dividend declaration than service sector.
3	2017	Impact of Dividend Announcements on the Stock Prices and	Priyanka U Naik, Preetam P Parab & Y V Reddy	To study the impact of dividend announcements on the stock	It studies the data for the period Jan 2011 to Dec 2015 and employs market	The results support the relevance of dividends models proposed

		Impact of Dividend Announcements on the Stock Prices and Liquidity: Evidence From India		prices and stock liquidity of Nifty 50 companies.	model of event study methodology as proposed by Fama and Fisher.	by Walter and Gordon. It finds significant impact of dividend announcements both on stock price and liquidity.
4	2016	Determinants of Dividend Policy of Indian Companies: A Panel Data Analysis	Nishant B. Labhane & Jitendra Mahakud	To study the determinants of the dividend policy of the NSE listed continuously paying dividend companies.	The panel data method and statistical tests like F-test, Lagrange Multiplier (LM) test and Hausman test are employed on sample data for the period 1994-95 to 2012-13.	The findings conclude investment opportunity, financial leverage, company size, business risk, firm life cycle, profitability, tax and liquidity as main determinants of dividend policy.
5	2014	Market Reaction to Stock Dividends: Evidence from India	Chhavi Mehta, P K Jain, and Surendra S Yadav	To study the impact of stock dividends on shareholders wealth.	It studies the sample data of 51 pure stock dividend announcements for the period Jan 2002 to June 2010 and event study methodology is employed.	The authors conclude that stock dividend announcements result in an increase in the wealth of the shareholders.
6	2013	Does the Dividend Announcement Matter in the Indian Stock Market?	Santosh Kumar & Raju G.	To study the signaling effect and significance of cumulative abnormal return of dividend announcement.	The sample data of 42 firms in BSE 500 Index is selected and the event methodology is undertaken and paired t test & ANOVA are applied.	The study finds that dividend announcements signal the information resulting upward share price movement that exit only for a day and price correction happens quickly.
7	2012	Determinants of Corporate Dividend Policy: A Tobit Model	Monica Singhania and Akshay Gupta	To check the validity of different opinions on determinants of	It uses Tobit regression model to prove empirically the significance of	It concludes that firm size, growth and investment as significant determinants

		Approach		dividend policy.	determinants of dividend policy.	while debt structure, profitability and experience as insignificant determinants of dividend policy in India.
8	2011	Determinants of Corporate Dividend Policy	S. Saravanakumar	To analyze the factors affecting dividend policy.	The author uses questionnaire method to study the perception of top management of the top 50 NSE listed companies for the period 2004-05 to 2008-09.	The author finds net profit, liquidity, sales and reserves position affecting significantly on dividend policy decisions.

IV. NEED OF STUDY

The corporate dividend policy entails part of the company earnings to be distributed as dividends and the other portion to be ploughed back into the firm for growth purposes. These decisions impact the perception of both current and prospective investors, wealth of the shareholders, reputation and the market capitalization of the company. Most of the empirical studies on the corporate dividend policy have been carried out in the developed economies while limited research is undertaken in the emerging or developing countries like India. And the conclusions drawn by these studies do not reach to any valid consensus on theoretical explanations of any dividend policy and cannot be generalized even after several decades of research due to varied time period, regulations and external factors.

Labhane & Mahakud (2016) in their study mention that many empirical studies have attempted to describe the factors affecting dividend policy in reference to specific theories of payout policy. Previous empirical theories carried out in India mention only about the determinants as explained by few theories like agency

cost, tax clientele and information asymmetric and signaling without considering other determinants as explained by other dividend theories.

Post liberalization era, there has been a drastic change in the shareholding pattern of the Indian firms, dividend distribution tax and average payout ratios. Many new firms have been listed on the stock exchanges. Since the formation of SEBI in 1992 as an apex regulator, the stock exchanges are now being regularly regulated and monitored efficiently. The Companies Act 2013 has also introduced various changes with respect to capital requirements, corporate governance mechanisms etc. The dynamic environment and various macro economic factors prevalent in the both domestic and foreign country have also affected the financial performances of the companies and their future sustainable development and growth. The last few decades marked significant improvement in the Indian financial system and stock market.

Therefore, there is a need to carry out an integrated, exhaustive and comprehensive study to investigate and empirically analyze the factors that determine the dividend policy decisions of the Indian firms. An attempt will also be made to study the relationship between the dividend policy and the share price volatility and market value of the firm.

V. OBJECTIVES OF THE STUDY

The underlying objective of this study is to contribute to the most crucial aspect in the area of corporate finance known as corporate dividend policy in the context of Indian stock market. The dividend policy decisions are determined by various factors and these decisions also impact the share price volatility and market value of the firm. Therefore, the proposed study will make an attempt to achieve the following objectives:-

1. To study the various dividend theories which determine the dividend policy decisions in the Indian corporate sector.

2. To empirically examine and verify dividend theories that determine the dividend policy decisions in the Indian corporate sector.

3. To empirically examine and verify the nature and extent of influence of various factors on dividend policy decisions.

4. To empirically examine and verify the nature and extent of impact of dividend policy on share price volatility.

5. To empirically examine the impact of dividend policy on the market value of firm.

VI. RESEARCH METHODOLOGY

The proposed study will be both descriptive and analytical in nature to achieve the stipulated objectives. Accordingly, it is divided into the following parts:-

1. Variables and Tests of Hypothesis

The extensive literature review provides the researcher with measures and determinants of dividend policy, share price volatility and the market value of the firm. On this basis, the following null hypotheses have been determined:-

i. Measures and Determinants of Dividend Policy

In this study, the following two proxies for dependent variable dividend policy have been identified:-

a. **Dividend Yield: -** It is calculated as the ratio of annual dividend paid by the company per share and market price per share.

b. **Dividend Payout Ratio:** - it is calculated as the ratio of total dividend paid annually and profits after tax.

The following independent variables as potential determinants of dividend policy have been identified for the purpose of this study:-

a. **Profitability: -** Return of Assets (ROA) will be used as proxy for profitability and it is calculated by earnings before interest and tax divided by the total assets.

   Hypothesis: - There is no significant relationship between profitability and the dividend policy.

b. **Business Risk**: - It is used as a proxy for the uncertainty in the firm's current and future earnings, and it is measured as the standard deviation of first difference of operating income divided by the total assets.

   Hypothesis: - There is no significant relationship between business risk and the dividend policy.

c. **Free Cash Flow: -** It is calculated as net operating cash flow divided by the total assets.

   Hypothesis: - There is no significant relationship between free cash flow and the dividend policy.

d. Firm Life Cycle: - It is used as proxy for firm's maturity and it is measured by retained earnings divided by total equity.

Hypothesis: - There is no significant relationship between firm life cycle and the dividend policy.

e. Firm Size: - It is measured as the natural logarithm of the market value of the firm's total assets.

Hypothesis: - There is no significant relationship between firm size and the dividend policy.

f. Leverage: - Debt ratio will be used as proxy for leverage which is calculated as ratio of long term debts to the book value of total assets.

Hypothesis: - There is no significant relationship between leverage and the dividend policy.

g. Assets Tangibility: - It is measured as a ratio of net fixed assets and total assets.

Hypothesis: - There is no significant relationship between assets tangibility and the dividend policy.

h. Liquidity: - Current Ratio will be used as proxy for liquidity that will be measured as ratio of current assets to current liabilities.

Hypothesis: - There is no significant relationship between liquidity and the dividend policy.

i. Investment Opportunity: - Market to book ratio will be used as proxy which is calculated as the market value of equity divided by the book value of equity.

Hypothesis: - There is no significant relationship between investment opportunity and the dividend policy.

j. Dividend Distribution Tax: - It is calculated as dividend distribution tax divided by profits after tax.

Hypothesis: - There is no significant relationship between dividend distribution tax and the dividend policy.

ii. Measures and Determinants of Share Price Volatility

The study will select the variables defined in the empirical studies by Baskin (1989), Hashemijoo, Ardekani, & Younesi (2012) and Ilaboya & Aggreh (2013) to measure the share price volatility.

a. Share Price Volatility: - It is taken as proxy for the firm's market risk and it will be the dependent variable in the study. It is calculated by dividing the annual range of stock prices with the average of high and low stock prices and then raised to second power.

b. Dividend Yield: - It is one of the main independent variable and it is calculated as the ratio of cash dividend paid to common shareholders and the market value of common stock at the beginning of the year.

c. Dividend Payout Ratio: - It is another main independent variable and it is calculated as the sum of cash dividend paid to common share holders divided by the net income after tax for each year.

d. Earnings Volatility: - It is one of the main control variables and it is measured as the standard deviation of the ratio of company's operating earnings before interest and tax (EBIT) to total assets.

e. Long Term Debt: - It is one of the control variables and it is measured by first obtaining the ratio of long-term debt with maturities greater than one year to total assets for each year and then the average of the results is taken.

f. Firm Size: - It is also one of the control variables and it is measured by the natural logarithm of the market value of equity at the beginning of each year.

g. Growth in Assets: - It is again one of the control variables and it is calculated first by obtaining the ratio of change in total assets at the end of the year to the level of total assets at the beginning of the year and then the average of the results is taken.

Hypothesis: - The dividend policy has no significant impact on the share price volatility.

iii. Measures and Determinants of the Market Value of the Firm

The market value of the firm is represented by the Tobin's q which will be the dependent variable. It is measured as the ratio of market value of firm's equity and debt over the replacement cost of assets. The Dividend Payout ratio and Earnings Per Share (EPS) will be taken as an independent variable of interest (Anton, 2016). The control variables that could have possible impact on the market value of the firm as defined by similar other previous studies will also be identified and taken during the course of study. The previous studies have observed that the firms following an optimal dividend policy will have direct relationship with the market value of the firm.

Hypothesis: - The dividend policy has no significant impact on the market value of the firm.

2. Sample Size

For empirical investigation of the determinants of corporate debt maturity, the researcher will construct sample of selected companies forming BSE 500 which may be a representative sample of Indian corporate sector for a period of five years. During the study, the financial, insurance and banking companies will be excluded from the sample due to difference in accounting practices, financing pattern and reporting practices.

3. Duration of the study

This study will be conducted covering period post Companies Act, 2013 starting from 2015-16 to 2019-20

4. Collection of Data

The data required for undertaking the study will be collected from the Prowess database of Centre for Monitoring Indian Economy (CIMIE), the financial statements of companies, websites, annual reports and other published documents.

5. Statistical Analysis Tools

Simple statistical tools like frequency distributions, histograms, bar diagrams etc will be used for presentation of data. Descriptive Statistics such as mean, median, standard deviations, variance, minimum, maximum etc. will be used for simple statistical analysis. Panel data methodology will also be employed to investigate and analyze the relationship between dependent and independent variables.

VII. OBJECTIVE WISE RESEARCH METHODOLOGY

S. No.	Objective	Research Methodology
1.	To study the various dividend theories which determine the dividend policy decisions in the Indian corporate sector.	The researcher will review the available literature to achieve this objective.
2.	To empirically examine and verify dividend theories that determine the dividend policy decisions in the Indian corporate sector.	The researcher will use descriptive statistics, Pearson's correlation and Regression techniques.
3.	To empirically examine and verify the nature and extent of influence of various factors on dividend policy decisions.	The researcher will calculate descriptive statistics such as mean, median, standard deviation etc. For establishing and jointly test the relationship between dependent variable and independent variables, Pearson's correlation coefficient and panel data regression techniques will be used.
4.	To empirically examine and verify the nature and extent of impact of dividend policy on share price volatility.	The researcher will calculate descriptive statistics such as mean. Median, standard deviation etc. For establishing and jointly test the relationship between dependent variable and independent variables, Pearson's correlation coefficient and panel data regression techniques will be used.
5.	To empirically examine the impact of dividend policy on the market value of firm.	The researcher will calculate descriptive statistics such as mean. Median, standard deviation etc. For establishing and jointly test the relationship between dependent variable and independent variables, Pearson's correlation coefficient and panel data regression techniques will be used.

VIII. STRUCTURE OF THESIS

Chapter Number	Chapter Name
Chapter 1	Introduction
Chapter 2	Literature Review
Chapter 3	An Analysis of Determinants of Dividend Policy in Indian Corporate Sector
Chapter 4	An Analysis of Impact of Dividend Policy on Share Price Volatility in Indian Corporate Sector
Chapter 5	An Analysis of Impact of Dividend Policy on the Market Value of Firm in Indian Corporate Sector
Chapter 6	Findings, Conclusions and Suggestions

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